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EXAMINER

BAIG, ADNAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,462	Applicant(s) DUAN, XIAOQIN	
	Examiner ADNAN BAIG	Art Unit 2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 1/11/2010 have been fully considered but they are not persuasive.
2. In regards to applicant's argument for the rejection of claim 8 under 35 U.S.C 112 second paragraph, the rejection has been withdrawn.
3. In regards to applicant's cancellation of claim 7, rejection under 35 U.S.C 112 second paragraph, for claims 7 and 14 have been withdrawn.
4. In regards to applicants argument of the rejection of claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Vanttinen (Of Record) in view of Clubb (Of Record) the applicant has submitted that the references of record, singly or in combination do not disclose or suggest *"a client handling the location estimate of the target user equipment and sending a location information acknowledgement with a handling result"*. Referring to the applicants specification (US 2007/0140180), there is no specific definition to the actual term "handling", or what action the client actually does with the location estimate of the target UE that represents the term "handling". In regards to claim 1, the examiner interprets a "handling" result to imply whether the client was able to receive the location information message carrying the location estimate of the target UE, successfully or un-successfully (**see Specification, Para [0045]**).

Referring to Fig. 4 & Para [0069], Vanttinen (Of Record), teaches an outside LCS client of the radio system is informed of the location of the subscriber terminal by the core network GMLC, as illustrated in the Fig. 4, message 428. The transaction of informing the LCS client of the location information, or more specifically, the LCS client receiving the actual content of message 428, discloses the LCS client "handling" the location estimate. Furthermore in **Para [0069] lines 5-7**, Vanttinen (Of Record), discloses the core network GMLC may independently inform an outside client of the location, provided that the GMLC database includes a valid order for this information, which suggests valid order information must be implemented in order for the outside client to "handle" the message 428. Although Vanttinen (Of Record) discloses a client handling the location estimate of target user equipment, Vanttinen (Of record) does not disclose sending to the LCS system, a location information Acknowledgement with a handling result, however the limitations would be rendered obvious in view of the teachings of Clubb (Of Record).

Referring to Fig. 7B, Clubb (Of record) illustrates an acknowledgement message 714 sent from client device 112 to protocol gateway 116. PG 716 can send acknowledgement of receipt of the complete multi-segment message (i.e., handling result) to MR 124. For each message segment, the client device 112 sends an acknowledgement (ACK) including receipt of the transmitted messages at the client device 112, hence client 112 has handled the message segments, and the ACK

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includes a receipt indicating the handling result, (**see Para [0434-0438]**). Furthermore, Clubb (Of record) discloses a non-acknowledgement message may be received at the message router which indicates a message intended for a client device failed (i.e., handling result to reach the client), (**see Para [0024]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for sending to the LCS system, a location information acknowledgement with a handling result after a client handles the location estimate of the target UE by including the teachings of Vanttinen who discloses an LCS (location service) system sending to a client the location information message carrying the location estimate of the target UE, and the client handling the location estimate of the target UE within the teachings of Clubb who discloses sending an acknowledgement message with a handling result from a client to a back end server (BES) via a protocol gateway because the teaching lies in Clubb to simplify wireless client and server application development environments to support the wide variety of device and network dependent architectures.

5. Furthermore, dependant claims 2-6 and 8-14 are also rejected under 35 U.S.C 103(a) over Vanttinen (Of Record) in view of Clubb (Of record) based on their dependency from independent Claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vanttinen US (2001/0009857) in view of Clubb et al. (US 2001/0034791)

Regarding Claim 1, Vanttinen discloses a handing method for providing a client with the location estimate of a target User Equipment (UE), the method comprising the steps of:

A. The LCS (location service) system (**see Fig. 3 step 302 & Fig. 1D, CN**) sending to the client (**see Fig. 4, LCS client**) the Location Information message (**see Fig. 4 INF message 428**) carrying the location estimate of the target UE, (**see Fig. 4 where LCS client receives message 428 (i.e., location information message) of subscriber terminal MS location (i.e., target UE) from GMLC. The GMLC received the location information message 418 through SGSN. See Para [0063] i.e., location service & [0067-0069] i.e., client receives location information**)

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B. The client, handling the location estimate of the target UE (**see Fig. 4 & Para [0069] lines 1-4 i.e., client handles the location estimate of the target UE when it is informed of the location of the subscriber terminal)**

Vanttinen does not disclose the limitation in step B where the client is sending to the LCS system, Location Information Acknowledgement with a handling result, however the limitation is known in the art of communications by evidence of Clubb et al. (US 2001/0034791)

Referring to Fig. 7A, Clubb illustrates a communication of messaging between a client device 112 and back end server (BES) 122. The client device responds with acknowledgement message (“ACK” step 4 – step 5) back to the protocol gateway 118 which confirms the client has received the information sent from BES 122, (**see Para [0423-0429]**)

Referring to Fig. 7B, Clubb illustrates an acknowledgement message 714 sent from client device 112 to protocol gateway 116. PG 716 can send acknowledgement of receipt of the complete multi-segment message (i.e., handling result) to MR 124, (**see Para [0434-0438]**)

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Clubb discloses a non-acknowledgement message may be received at the message router which indicates a message intended for a client device failed (i.e., handling result) to reach the client, (**see Para [0024]**)

Clubb teaches due to messaging solutions being device and network protocol specific, current developers of client computing solutions must have intimate knowledge of specific network characteristics e.g., wireless network characteristics, protocol environments, and wireless links channel characteristics. Therefore there exists a need to simplify wireless client and server application development environments to support the wide variety of device and network dependent architectures, (**see Para [0005]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for sending to the LCS system, a location information acknowledgement with a handling result after a client handles the location estimate of the target UE by including the teachings of Vanttinen who discloses an LCS (location service) system sending to a client the location information message carrying the location estimate of the target UE, and the client handling the location estimate of the target UE within the teachings of Clubb who discloses sending an acknowledgement message with a handling result from a client to a back end server (BES) via a protocol gateway because the teaching lies in Clubb to simplify wireless client and server application development environments to support the wide variety of device and network dependent architectures.

Regarding Claim 2, the combination of Vanttinen in view of Clubb disclose a method according to Claim 1, further comprising before the step A: a requestor originating a LCS location request (**Vanttinen see Fig. 4, REQ 400**) against a target UE (**Vanttinen see Fig. 4 MS**) to the LCS system, (**Vanttinen see Fig. 3 step 302 & Para [0057]**)

requesting the LCS system to provide the location estimate of the target UE to a client, (**Vanttinen see Para [0058] i.e., informing an outside client**)

a location estimate of the target UE was successfully obtained by the LCS system, (**Vanttinen see Fig. 4, RSP 416 & Para [0064]**)

Regarding Claim 3 the combination of Vanttinen in view of Clubb disclose a method according to Claim 1, further comprising after the step B:

C. the LCS system, after receiving the Location Information Acknowledgement with the handling result, sending to the requestor an LCS Location Response carrying the handling result, (**Vanttinen, see Fig. 4, LOC 430 & Para [0070]**)

Regarding Claim 4, the combination of Vanttinen in view of Clubb disclose a method according to Claim 3, wherein the step C comprises the steps of:

C1. After receiving the Location Information Acknowledgement with the handling result, GMLC (gateway mobile location center) in the LCS system sending to CN (Core

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Network) in the LCS system a Subscriber Location Report Acknowledgment, which carrying the handling result, (**Vanttinen, see Fig. 4, ACK 420 & Para [0067]**) (**see Fig. 7B, where Clubb illustrates gateway PG 116 sending Msg1 Ack (step 716) to BES 122 via MR124, once it has received ACK 714 from client device 112, see Para [0436-0438]**)

C2. After receiving the Subscriber Location Report Acknowledgment, the CN sending to the requestor an LCS Location Response carrying the handling result, (**Vanttinen, see Fig. 4, LOC 430 & Para [0070]**)

Regarding Claim 5, the combination of Vanttinen in view of Clubb disclose a method according to Claim 1, wherein

the step A comprises the GMLC in the LCS system sending to the client a Location Information message carrying the location estimate of the target UE, (**Vanttinen, see Fig. 4 i.e., GMLC sends INF 428 to LCS client & Para [0068]**)

the step B comprises the client, after receiving the Location Information message, handling the location estimate of the target UE, (**Vanttinen, Para [0069] lines 1-4 i.e., client handles the location estimate of the target UE when it is informed of the location of the subscriber terminal**)

then sending to the GMLC the Location Information Acknowledgement carrying the handling result, (**Clubb, see Fig. 7B Ack 714 to gateway PG 116 & Para [0436]**)

Regarding Claim 6, the combination of Vanttinen in view of Clubb disclose a method according to Claim 5, further comprising before the step B:

GMLC in the LCS system sending to the CN in the LCS system the Subscriber Location Report Acknowledgement, (**Vanttinen, see Fig. 4 ACK 420 & Para [0067-0068]**)

(Determining whether the GMLC is to issue a subscriber location report acknowledgement to the CN (core network) before (*claim 6*) or after (*claim 4*) the client handles the location estimate of the target UE and sends an information acknowledgement with a handling result is merely a matter of obvious engineering design choice, because the teachings of Clubb et al. disclose the end result of whether a client device has received a message at a back end server (BES) is determined by the steps of a gateway sending an acknowledgement with a handling result of a client device to the back end server (BES), see *MPEP 2144*)

Regarding Claim 8, the combination of Vanttinen in view of Clubb disclose a method according to Claim 1, wherein the handling result comprises a success flag indicating that the location estimate has been handled successfully by the client, (**Clubb, see Para [0436-0437] i.e., complete multi-segment message has been received (i.e., success))**)

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Regarding Claim 9, the combination of Vanttinen in view of Clubb disclose a method according to Claim 1, wherein the handling result comprises a failure flag indicating that the location estimate has been handled unsuccessfully by the client, (**Clubb, see Para [0024]**)

Regarding Claim 10, the combination of Vanttinen in view of Clubb disclose, a method according to Claim 9, wherein the handling result comprises further the error cause, (**Clubb, see Para [0552]**)

Regarding Claim 11, the combination of Vanttinen in view of Clubb disclose, a method according to Claim 1, wherein the requestor comprises the target UE being located or a third-party device other than the target UE, (**Vanttinen, see Para [0069]**)

Regarding Claim 12, the combination of Vanttinen in view of Clubb disclose, a method according to Claim 4, wherein the CN comprises MSC (Mobile Switch Center)/MSC Server or SGSN (Serving GPRS Support Node, GPRS General Packet Radio Service), (**Vanttinen, see Fig. 1D, SGSN 140 & Para [0032]**)

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Regarding Claim 13, the combination of Vanttinen in view of Clubb, disclose a method according to Claim 1, wherein the client comprises an LCS Client, (**Vanttinen, see Fig. 4 LCS client & Para [0068]**)

Regarding Claim 14, the combination of Vanttinen in view of Clubb discloses a method according to Claim 2, further comprising after the step B:

C. the LCS system, after receiving the Location Information Acknowledgement with the handling result, sending to the requestor an LCS Location Response carrying the handling result, (**Vanttinen, see Fig. 4, LOC 430 & Para [0070]**)

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 2461

/Huy D Vu/
Supervisory Patent Examiner, Art Unit 2461